Test Report

Company Name shown on Report	ZHEJIANG RECTRON ELECTRONIC CO.,LTD.
Address	NO.111 CHENGGONG ROAD, HUIMIN DISTRICT,JIASHAN COUNTY, JIAXING CITY,ZHEJIANG PROVINCE, CHINA

The following sample(s) and sample information was/were submitted and identified by/on the behalf of the applicant

Sample Name(s)	Solder Paste
Model No.	NC-777
Material	Pb、Sn、Ag
Sample Received Date	Jun. 5, 2026
Testing Period	Jun. 5, 2026 to Jun. 15, 2026

Test Requested	As specified by client, to test Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates, Beryllium(Be), Antimony(Sb), Fluorine (F), Chlorine (Cl), Bromine (Br) , Asbestos in the submitted sample(s).
Test Method/Test Result(s)	Please refer to the following page(s).

Approved by Chen kaimin Date Jun. 15, 2026

Chen kaimin
Lab Manager

Hotline:400-6788-333 Complaint call:0755-33681700 www.cti-cert.com www.ctimall.com E-mail:info@cti-cert.com Complaint E-mail:complaint@cti-cert.com

Test Report

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Conclusion

Tested Item(s)	According to standard/directive	Result
Lead (Pb), Cadmium (Cd), Mercury (Hg), Hexavalent Chromium (Cr(VI)), Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs), Phthalates (DBP, BBP, DEHP, DIBP)	RoHS Directive 2011/65/EU with amendment (EU) 2015/863	PASS
Beryllium(Be)	IEEE 1680.1-2018 4.1.4.1	PASS

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Test Method

Tested Item(s)	Test Method	Measured Equipment(s)
Lead (Pb)	IEC 62321-5:2013	ICP-OES
Cadmium (Cd)	IEC 62321-5:2013	ICP-OES
Mercury (Hg)	IEC 62321-4:2013+AMD1:2017 CSV	ICP-OES
Hexavalent Chromium (Cr(VI))	IEC 62321-7-1:2015	UV-Vis
	IEC 62321-7-2:2017 and/or determination of Total Chromium by IEC 62321-5:2013	UV-Vis/ICP-OES
Polybrominated Biphenyls (PBBs)	IEC 62321-6:2015	GC-MS
Polybrominated Diphenyl Ethers (PBDEs)	IEC 62321-6:2015	GC-MS
Phthalates (DBP, BBP, DEHP, DIBP)	IEC 62321-8:2017	GC-MS
Beryllium(Be)	Refer to US EPA 3050B:1996 & US EPA 6010D:2018	ICP-OES
	Refer to US EPA 3052:1996 & US EPA 6010D:2018	
Antimony(Sb)	Refer to US EPA 3050B:1996 & US EPA 6010D:2018	ICP-OES
	Refer to US EPA 3052:1996 & US EPA 6010D:2018	
Fluorine (F)	EN 14582:2016	IC
Chlorine (Cl)	EN 14582:2016	IC
Bromine (Br)	EN 14582:2016	IC
Phthalates	IEC 62321-8:2017	GC-MS
Asbestos	ISO 22262-1:2012+NIOSH 9000:2015+NIOSH 9002:1994	PLM+XRD

Test Result(s)

Tested Item(s)	**Result**		**MDL**	**Limit**
	003	**011**		
Lead (Pb)	936247 mg/kg*	2401 mg/kg*[1]	2 mg/kg	1000 mg/kg
Cadmium (Cd)	N.D.	N.D.	2 mg/kg	100 mg/kg
Mercury (Hg)	N.D.	N.D.	2 mg/kg	1000 mg/kg
Hexavalent Chromium (Cr(VI))	N.D.▼	--	0.10 μg/cm ² (LOQ)	1000 mg/kg
	--	N.D.	8 mg/kg	1000 mg/kg

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Tested Item(s)	Result	MDL	Limit
	011		
Polybrominated Biphenyls (PBBs)			
Monobromobiphenyl	N.D.	5 mg/kg	1000 mg/kg
Dibromobiphenyl	N.D.	5 mg/kg	
Tribromobiphenyl	N.D.	5 mg/kg	
Tetrabromobiphenyl	N.D.	5 mg/kg	
Pentabromobiphenyl	N.D.	5 mg/kg	
Hexabromobiphenyl	N.D.	5 mg/kg	
Heptabromobiphenyl	N.D.	5 mg/kg	
Octabromobiphenyl	N.D.	5 mg/kg	
Nonabromobiphenyl	N.D.	5 mg/kg	
Decabromobiphenyl	N.D.	5 mg/kg	

Tested Item(s)	Result	MDL	Limit
	011		
Polybrominated Diphenyl Ethers (PBDEs)			
Monobromodiphenyl ether	N.D.	5 mg/kg	1000 mg/kg
Dibromodiphenyl ether	N.D.	5 mg/kg	
Tribromodiphenyl ether	N.D.	5 mg/kg	
Tetrabromodiphenyl ether	N.D.	5 mg/kg	
Pentabromodiphenyl ether	N.D.	5 mg/kg	
Hexabromodiphenyl ether	N.D.	5 mg/kg	
Heptabromodiphenyl ether	N.D.	5 mg/kg	
Octabromodiphenyl ether	N.D.	5 mg/kg	
Nonabromodiphenyl ether	N.D.	5 mg/kg	
Decabromodiphenyl ether	N.D.	5 mg/kg	

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Tested Item(s)	Result	MDL	Limit
	003		
Polybrominated Biphenyls (PBBs)			
Monobromobiphenyl	N.D.	5 mg/kg	1000 mg/kg
Dibromobiphenyl	N.D.	5 mg/kg	
Tribromobiphenyl	N.D.	5 mg/kg	
Tetrabromobiphenyl	N.D.	5 mg/kg	
Pentabromobiphenyl	N.D.	5 mg/kg	
Hexabromobiphenyl	N.D.	5 mg/kg	
Heptabromobiphenyl	N.D.	5 mg/kg	
Octabromobiphenyl	N.D.	5 mg/kg	
Nonabromobiphenyl	N.D.	5 mg/kg	
Decabromobiphenyl	N.D.	5 mg/kg	

Tested Item(s)	Result	MDL	Limit
	003		
Polybrominated Diphenyl Ethers (PBDEs)			
Monobromodiphenyl ether	N.D.	5 mg/kg	1000 mg/kg
Dibromodiphenyl ether	N.D.	5 mg/kg	
Tribromodiphenyl ether	N.D.	5 mg/kg	
Tetrabromodiphenyl ether	N.D.	5 mg/kg	
Pentabromodiphenyl ether	N.D.	5 mg/kg	
Hexabromodiphenyl ether	N.D.	5 mg/kg	
Heptabromodiphenyl ether	N.D.	5 mg/kg	
Octabromodiphenyl ether	N.D.	5 mg/kg	
Nonabromodiphenyl ether	N.D.	5 mg/kg	
Decabromodiphenyl ether	N.D.	5 mg/kg	

Tested Item(s)	Result	MDL	Limit
	011		
Phthalates (DBP, BBP, DEHP, DIBP)			
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg	1000 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg	1000 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg	1000 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg	1000 mg/kg

Tested Item(s)	Result	MDL	Limit
	003		
Phthalates (DBP, BBP, DEHP, DIBP)			
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	50 mg/kg	1000 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	50 mg/kg	1000 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	50 mg/kg	1000 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	50 mg/kg	1000 mg/kg

Tested Item(s)	Result	MDL	Limit
	003		
Beryllium (Be)	N.D.	10 mg/kg	1000 mg/kg

Tested Item(s)	Result	MDL	Limit
	011		
Beryllium (Be)	N.D.	10 mg/kg	1000 mg/kg

Tested Item(s)	Result	MDL
	003	
Antimony (Sb)	N.D.	10 mg/kg

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Tested Item(s)	Result	MDL
	011	
Antimony (Sb)	N.D.	10 mg/kg

Tested Item(s)	Result		MDL
	003	011	
Fluorine (F)	N.D.	N.D.	10 mg/kg
Chlorine (Cl)	N.D.	N.D.	10 mg/kg
Bromine (Br)	N.D.	5755 mg/kg	10 mg/kg

Tested Item(s)	Result		MDL
	003	011	
Phthalates			
Dibutyl phthalate (DBP) CAS#:84-74-2	N.D.	N.D.	50 mg/kg
Butyl benzyl phthalate (BBP) CAS#:85-68-7	N.D.	N.D.	50 mg/kg
Di-(2-ethylhexyl) phthalate (DEHP) CAS#:117-81-7	N.D.	N.D.	50 mg/kg
Di-n-octyl phthalate (DNOP) CAS#:117-84-0	N.D.	N.D.	50 mg/kg
Di-isononyl phthalate (DINP) CAS#:28553-12-0, 68515-48-0	N.D.	N.D.	50 mg/kg
Di-iso-decyl phthalate (DIDP) CAS#:26761-40-0, 68515-49-1	N.D.	N.D.	50 mg/kg
Diisobutyl phthalate (DIBP) CAS#:84-69-5	N.D.	N.D.	50 mg/kg
Dipentyl phthalate (DPP/DPENP) CAS#:131-18-0	N.D.	N.D.	50 mg/kg
Di-n-hexyl phthalate (DNHP/DHEXP) CAS#:84-75-3	N.D.	N.D.	50 mg/kg
Bis(2-methoxyethyl) phthalate (DMEP) CAS#:117-82-8	N.D.	N.D.	50 mg/kg
Diisopentyl phthalate (DIPP) CAS#:605-50-5	N.D.	N.D.	50 mg/kg
N-Pentyl-isopentyl phthalate (NIPP) CAS#:776297-69-9	N.D.	N.D.	100 mg/kg

Test Report

Material Category	Substances/CAS Numbers	Results	
		003	011
Asbestos (CAS 1332-21-4)	Chrysotile/12001-29-5	N.A.D.	N.A.D.
	Crocidolite/12001-28-4	N.A.D.	N.A.D.
	Amosite /12172-73-5	N.A.D.	N.A.D.
	Tremolite Asbestos/ 77536-68-6	N.A.D.	N.A.D.
	Actinolite Asbestos /77536-66-4	N.A.D.	N.A.D.
	Anthophyllite Asbestos/77536-67-5	N.A.D.	N.A.D.

Sample/Part Description

No.	CTI Sample ID	Description
1	003	Silvery metal
2	011	Brown paste(dry weight) *2

Remark: **The sample(s) had been dissolved totally tested for Lead, Cadmium, Mercury, Beryllium, Antimony.**

-MDL = Method Detection Limit

-N.D. = Not Detected (<MDL or LOQ)

-mg/kg = ppm = parts per million

-1000 mg/kg = 0.1%

-LOQ = Limit of Quantification, The LOQ of Hexavalent chromium is 0.10 μg/cm^2

-▼The sample is negative for Cr(VI) − The Cr(VI) concentration is below 0.10 μg/cm^2. The coating is considered a non-Cr(VI) based coating. Information on storage conditions and production date of the tested sample is unavailable and thus Cr(VI) results represent status of the sample at the time of testing.

-*= According to the client's statement, the material of the sample(s) fall into exemption items 7(a) according to EU Directive 2011/65/EU :Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead).

-*1= According to the client's statement, lead mainly comes from the high melting temperature type solders. Lead in high melting temperature type solders (i.e. lead-based alloys containing 85 % by weight or more lead, with reference to EU Directive 2011/65/EU annex III Exemption Applications 7(a).

-*2=The sample was tested after drying for 2 hours under 105 ℃.

-N.A.D.= No Asbestos Detected(<Limit of detection)

Explanation（Asbestos）

-The limit of detection of this method is defined as the detection and identification of one fibre or fibre bundle in the amount of sample examined. With appropriate matrix reduction procedures that are tailored to the nature of the sample, the limit of detection can be significantly lower than 0.1%.

-The estimated concentration(s) of the asbestos varieties detected in ranges is/are as follows: Trace (<0.1%), 0.1%~5%, 5%~50%, and 50%~100%.

-Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos-containing bulk materials using polarized light microscopy. These materials often contain milled asbestos with too small fibre diameter and length to be detected.

-X-ray diffraction analysis cannot discriminate the particle shape in analytical sample and detects not only asbestos of fibrous form but also non-fibrous minerals related to asbestos such as serpentine minerals and/or amphibole minerals if they coexist.

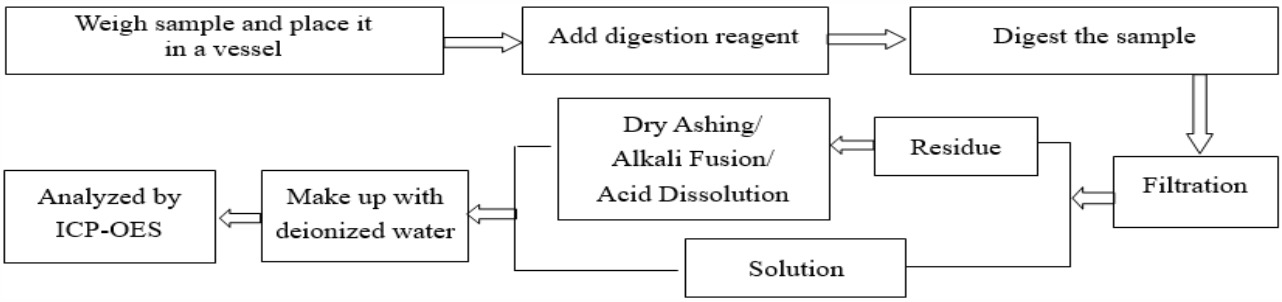
-CTI Asbestos Testing Center has established strict quality assurance and supervision procedures in accordance with international standard. And the laboratory participates in the AIMS* every year (three times per year) to confirm our proficiency.

*The Asbestos in Materials Scheme (AIMS) is an international inter-laboratory testing scheme, and it is managed by the Health and Safety Laboratory (HSL) which on behalf of the Health and Safety Executive (HSE) of UK.

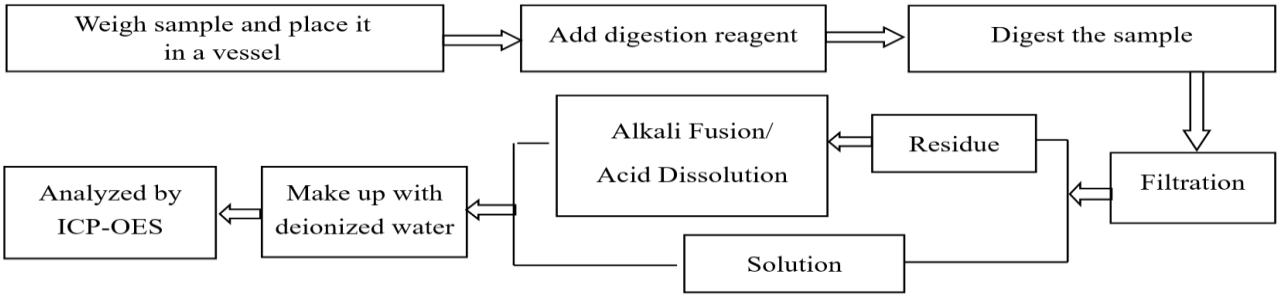
Test Report

Test Process

1. Lead (Pb), Cadmium (Cd), Chromium(Cr)

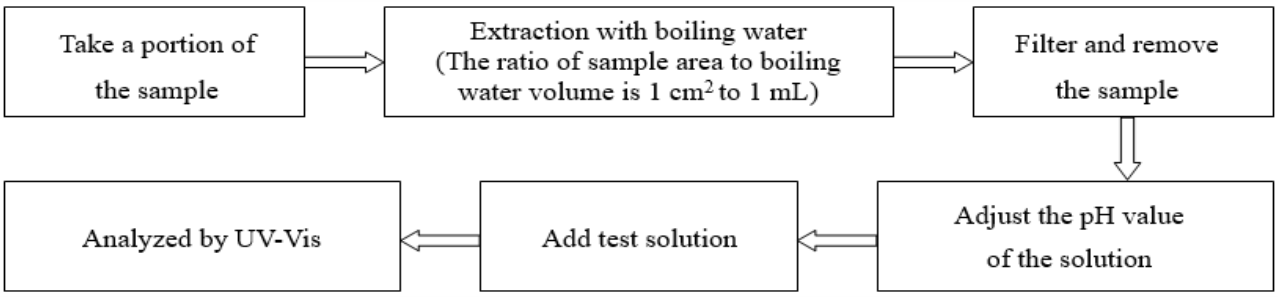


2. Mercury (Hg)

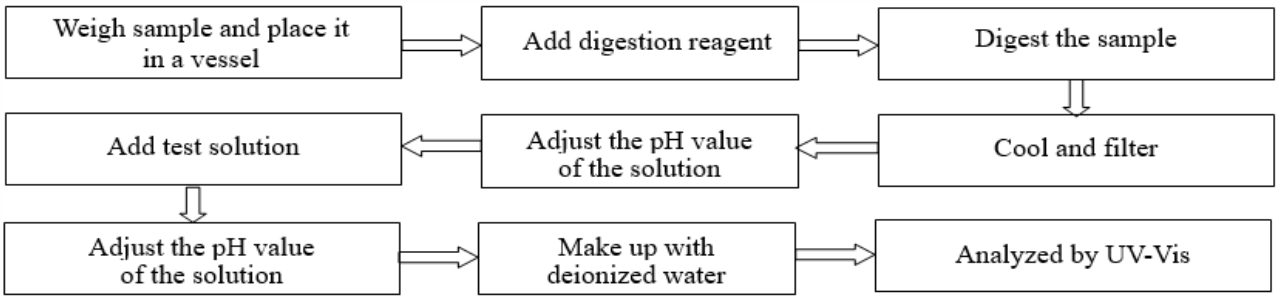


3. Hexavalent Chromium (Cr(VI))

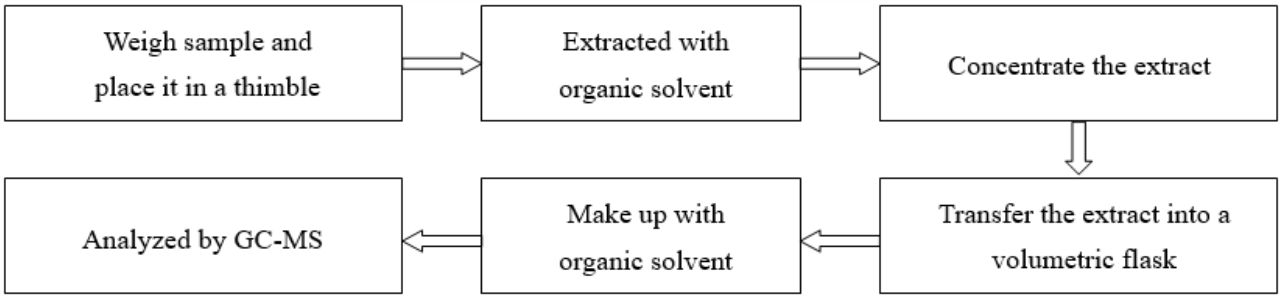
(1) IEC 62321-7-1:2015



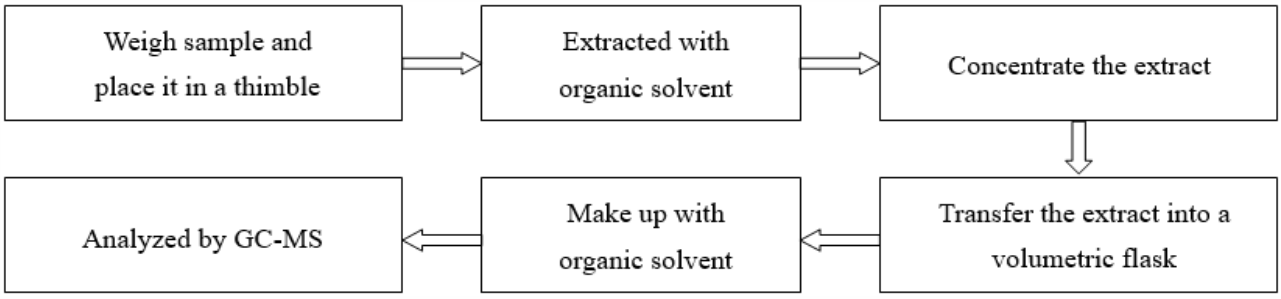
(2) IEC 62321-7-2:2017



4. Polybrominated Biphenyls (PBBs), Polybrominated Diphenyl Ethers (PBDEs)

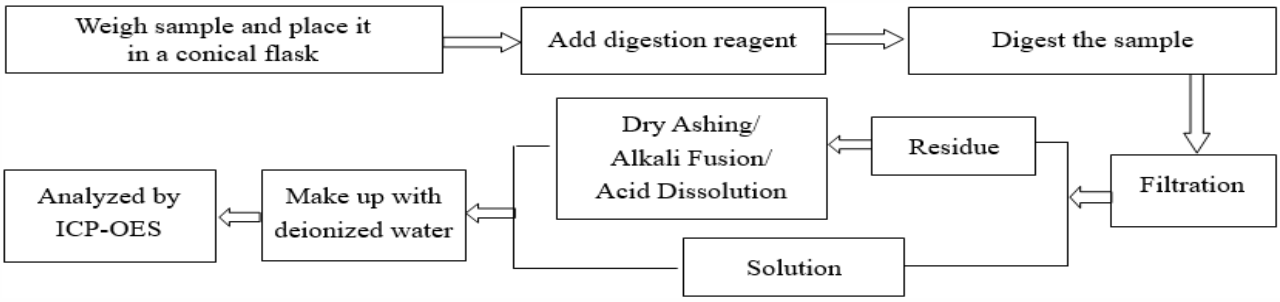


5. Phthalates (DBP, BBP, DEHP, DIBP), Phthalates

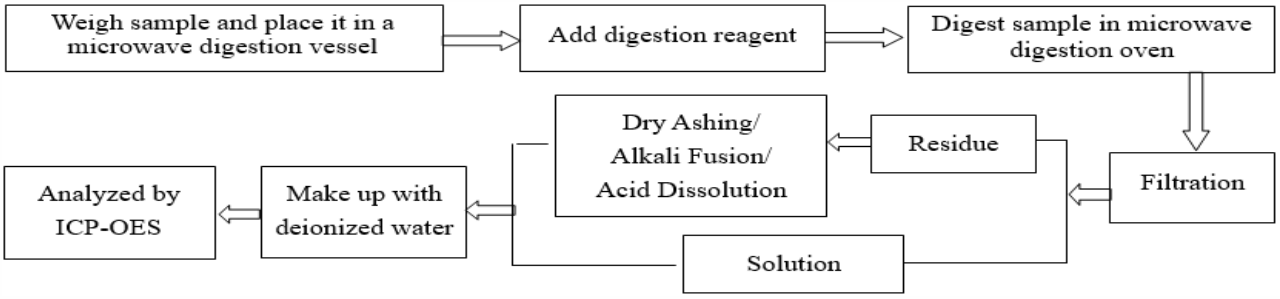


6. Beryllium(Be), Antimony(Sb)

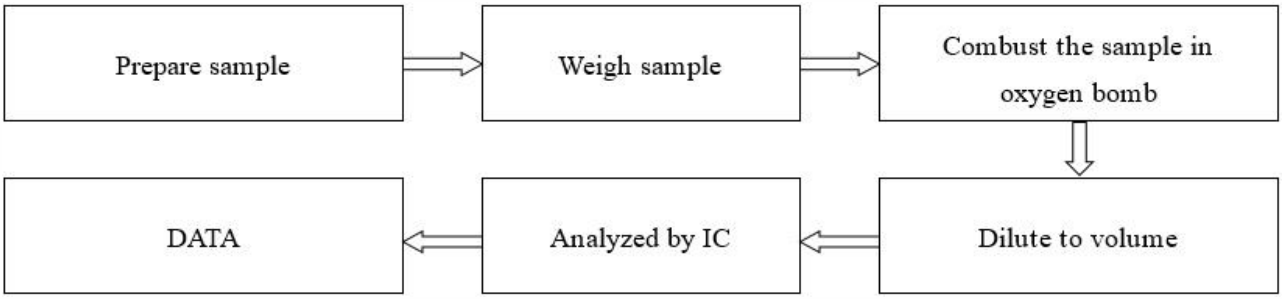
(1) Refer to US EPA 3050B:1996 & US EPA 6010D:2018



(2) Refer to US EPA 3052:1996 & US EPA 6010D:2018

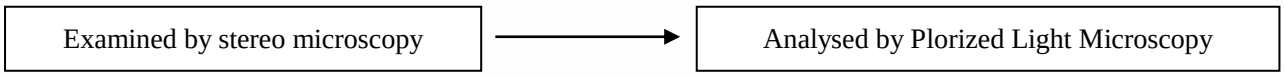


7. Fluorine (F), Chlorine (Cl), Bromine (Br)

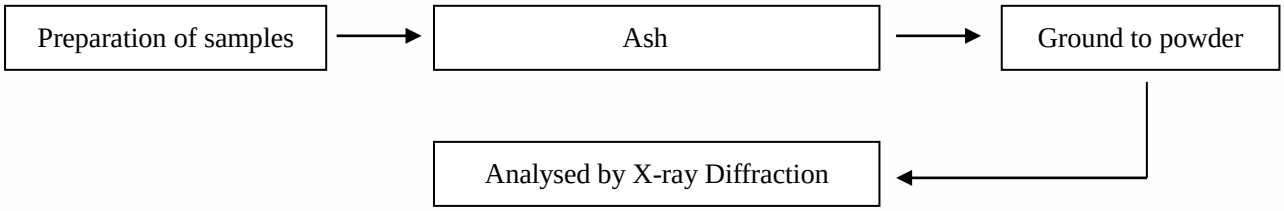


8. Asbestos

PLM

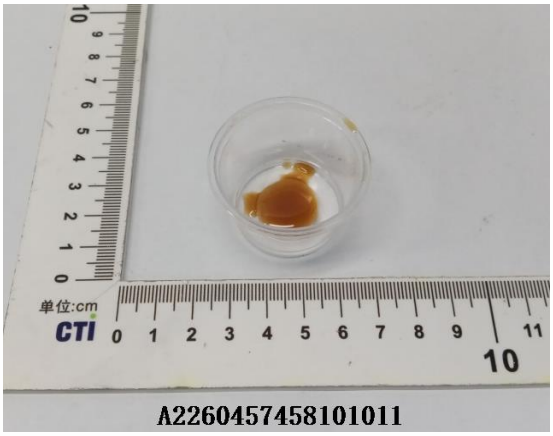


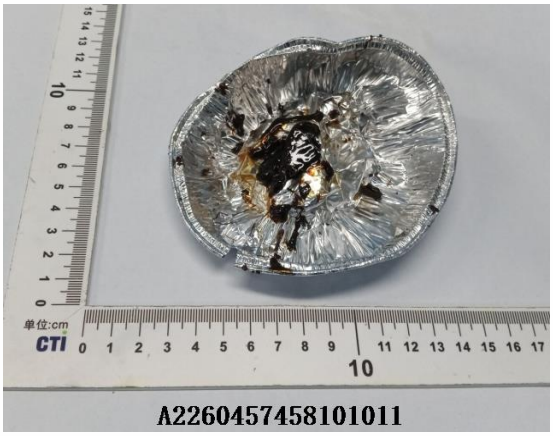
XRD



Test Report

Photo(s) of the sample(s)





Statement:

1. This report is considered invalid without approved signature, special seal and the seal on the perforation;
2. The Company Name shown on Report and Address, the sample(s) and sample information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified;
3. The result(s) shown in this report refer(s) only to the sample(s) tested;
4. Unless otherwise stated, the decision rule for conformity reporting is based on Binary Statement for Simple Acceptance Rule (w=0) stated in ILAC-G8:09/2019 / CNAS-GL015:2022;
5. Without written approval of CTI, this report can't be reproduced except in full;
6. In case of any discrepancy between the English version and Chinese version of the reports (if generated), the Chinese version shall prevail.

*** End of Report ***

Appendix

Client Reference Information

0402/0603/1.5KE/A405/AKM/BDB/BR-10/BR-15W/BR-3/BR-6/BR-8/
BKM/CSP/D2PAK/D3K/DB/BDB/DBLS/DBS/DFN5x6EP/DFN0603/DFN0603-2L/
DFN1006/DFN1006-2/2L/DFN1006-3/3L/DFN1610/DFN2.6*2.6-10L/DFN2×2-3L/
DFN2510/DFN2X2-6L/DFN3.3X3.3/DFN3x3/DFN4120-10L/DFN5x6/DFN5X6-8L/
DFNWB0.6*0.3/DI5/DO15/DO201AD/DO-213AB/DO218/DO218AB/
DO277/DO277A/DO34/DO35/DO41/DO41G/DPAK/ESOP-8/HR-MS/HVM/HVML/HVP/
ITO220/ITO220A/ITO220AC/KBL/KBP/KBPG/LL34/LL41/LMDS/LFPAK5X6/MB-F/MBM/
MDA/MDC/MDF/MDK/MDS/MDSJ/MELF/MICRO-MELF/MINI-MELF/MP-15/MP-15W/MP-25/
MP-25W/MP-35/MP-35W/MP-40/MP-50/MP-50W/MSBM/MSBS/MSOP10/MT-35/MT-35W/
PDFN5X6P/PPAK3x3/PPAK5X6/PQFN2X2/PDFN2X2/R1/R10000H/R12000H/R10KH/R12KH
R16KH/R30KH/R2/R3/R4/R5/R6/R7/R8KH/R9KH/RB-15/RBU/RBUH/RC-2/RS1/RS1L/
RS10M/RS10MLS/RS15M/RS15MLS/RS1M/RS2/RS20M/RS20MLS/RS25M/RS25MLS/RS2L/RS2M/
RS30M/RS35M/RS35TB/RS40M/RS485/RS4L/RS4M/RS50M/RS6/RS6L/RS60M/RS6M/
RS-6MLS/RS8/RS8L/RS8M/RSBF/S35VB/S50VB/SBR/SC-75/SOT416/SKBPC/
SLDBS/SlimPAQ/SlimPAQ-1/SLMDS/SLPDS/SMA（DO214AC）/SMAF/SMA-S/
SMB（DO214AA）/SMBF/SMB-F/SMC（DO214AB）/
SMAHE-C/SMX/SOD123/SOD123F/SOD123F(L)/SOD123F(L)-1/SOD123FH/
SOD123FL/SOD123S/SOD123ST/SOD123FL-1/SOD323/SOD323F/SOD523/SOD523F/
SOD723/SOD80C/SOD882/SOD923/SOF2-4/SOP-8L/SOP-14/SOP-8/SOF2-4/SOT89/
SOT143/SOT223/SOT223-2L/3L/SOT227/SOT23/SOT23-3L/SOT23-3S/SOT23-5/SOT236/
SOT23-6/6L/SOT26/SOT323/SOT323FL/SC70/SOT346/SOT353/SOT363/SOT363-6L/
SOT523/SOT563/SOT723/SOT883/SOT89/SOT89-3L/SSOD923 /SSOT-6L/Sub-SMA/
TO126/TO263/TO220/TO220-3L/TO220A/TO220A-1/TO220AB/TO220AC/
TO220C/TO220F/TO220FAC/TO247/TO247-3L/TO247S/TO251/TO252/TO252-5L/
TO3P/TO92/TO92L/TO92S/TOLL9/TOLL-8L/TQFN16/TSOT23-5/TDFN2x2-6L/TSOT23-6L/
TSSOP14/TSSOP-8/TO126/TO126F/TO262/TO252-4L/TO-3P/UDFN-3L/ULBF/WBFBP-02C/WOM/WLCSP-10L/X3DFN2/MBF-T/UMBT/ABS/LBF

Statement:

1. The Appendix Information was/were provided by the applicant who should be responsible for the authenticity which CTI hasn't verified.
2. The Appendix Information is/are the supplement(s) for the Report A2260457458101003.